

CLAIMS

1. A process for the preparation of a composition comprising a pentasil-type zeolite, which process comprises the steps of:
 - 5 a) hydrothermally treating an aqueous slurry comprising an aluminium source, a silicon source, a seeding material, and optionally a divalent metal source, thereby forming a pentasil-type zeolite and at least one other compound, and
 - b) shaping the product of step a).
- 10 2. The process of claim 1 wherein the at least one other compound is selected from the group consisting of anionic clay, cationic clay, Si-Al cogel, and (pseudo)boehmite.
3. The process of claim 1 wherein the pentasil-type zeolite is a ZSM-type zeolite or
15 zeolite beta.
4. The process of claim 1 wherein a doped seed is used as the seeding material in step a).
- 20 5. The process of claim 1 wherein step a) comprises mixing of an aluminium source, a silicon source, a seeding material, and a divalent metal source in a slurry, and wherein the divalent metal source is a magnesium source.
6. The process of claim 6 wherein the magnesium source is selected from the
25 group consisting of MgO, Mg(OH)₂, hydromagnesite, magnesium carbonate, magnesium hydroxycarbonate, Mg-acetate, Mg-hydroxy-acetate, and mixtures thereof.

7. The process of claim 1 wherein the aluminium source is selected from the group consisting of aluminium trihydrate, flash-calcined aluminium trihydrate, boehmite, pseudoboehmite, aluminium sol, amorphous alumina, gel alumina, transition alumina, and mixtures thereof.

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8. The process of claim 1 wherein the silicon source is sodium (meta) silicate, silica sol, or a mixture thereof.

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9. The process of claim 1 wherein step a) is performed continuously in a series of at least two reaction vessels.

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10. The process of claim 1 wherein step a) comprises mixing of an aluminium source, a silicon source, a seeding material, and a divalent metal source in a slurry, thereby forming a pentasil-type zeolite and an anionic or cationic clay as the other compound.

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11. The process of claim 1 wherein step a) comprises mixing of a silicon source, an excess of aluminium source, and a seeding material, thereby forming a pentasil-type zeolite and (pseudo)boehmite as the other compound.